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SELF-ESTEEM AND ALCOHOL DEPENDENCE AS PREDICTORS OF CONTEMPLATION TO USE DRUGS AMONG UNIVERSITY STUDENTS IN BOTSWANA

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ABSTRACT

This exploratory study aimed to draw attention to the plight of young people who contemplate to use drugs in order to cope with emotional distress. The study was entrenched within the Theory of Reasoned Action/Planned Behaviour, based on which it was assumed that contemplation to use drugs could lead to actual drug use.

Data were collected from a sample of 249 undergraduate students (65.4% female; *mean* age = 20.12 years, SD = 2.02). Contemplation to use drugs was measured through a single-item scale. Self-esteem was measured by Rosenberg's self-esteem scale, and alcohol dependence was measured with a four-item scale. We hypothesised that self-esteem and alcohol dependence would predict contemplation of drug use. Among participants who reported contemplation of drug use, 56.6 percent reported repeated use of illicit drugs while 43.4 percent had not taken illicit drugs. Low self-esteem was not associated with drug use or alcohol dependence but was associated with contemplation of drug use (p = 0.000). Binary logistic regression analysis revealed that an increase in self-esteem decreased the probability of contemplating drug use (p = 0.016), while higher alcohol dependence increased the probability of contemplating drug use (p = 0.019). The results are discussed with regard to substance abuse prevention programmes in tertiary education.

Key words: alcohol dependence, avoidance behaviour, Botswana, coping, drug use, emotional distress, self-esteem

Worldwide, drug use is a potential risk for the youth and their families (Degenhardt et al., 2008; Degenhardt et al., 2013; Obot, 2001; Odejide, 2006; UNODC, 2014). Repeated drug use has adverse consequences on young people's physical, cognitive and emotional development (Hall & Degenhardt, 2009) and can result in behavioural problems such as low academic performance, risky sexual behaviours, and involvement in criminal activities (Lynskey & Hall, 2000; Macleod et al., 2004).

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There are various social and psychological factors that contribute to young people's motivation to start using drugs. The most prominent influence on drug use is peer pressure (Lee, Neighbors, & Woods, 2007), which is often combined with young people's tendency to overestimate how many of the youth actually take drugs, which may result in the use of drugs to fit the perceived norm (Botvin, 2000). Another reason that motivates young people to start using drugs is curiosity to experiment with drugs (Lee et al., 2007). Young people also take drugs for recreational purposes in order to have fun, to relax or to escape boredom (Lee et al., 2007). Some young people take drugs to forget about their fears and anxieties and to cope with emotional distress (Bonn-Miller, Zvolensky, & Bernstein, 2007; Bruckner, Bonn-Miller, Zvolensky, & Schmidt, 2007; Simons, Correia, Carey, & Borsari, 1998).

Taking drugs to forget about one's distress is a form of avoidance behaviour (Lazarus & Folkman, 1984). One of the psychological factors that contribute to avoidance behaviour is self-esteem. Self-esteem refers to how individuals feel about themselves, the worth they attribute to themselves as a person, and how they evaluate themselves in comparison to other people (Leary & Guadagno, 2011; Rosenberg, 1965). Self-esteem contributes to the way in which a person copes with stressful events. While high self-esteem encourages problem-focused coping, low self-esteem is associated with avoidance behaviour (Connor, Poyrazli, Ferrer-Wreder, & Grahame, 2004). In the context of drug use, high self-esteem can protect against drug and other substance abuse (Zamboanga, Schwartz, Jarvis, & Van Tyne, 2009), while low self-esteem has been found to be a predictor of drug use (Brook, Rubenstone, Zhang, Morojele, & Brook, 2011; Odejide, 2006; Wild, Flisher, Bhana, & Lombard, 2004;).

The relationship between self-esteem and drug use is likely to be cyclical. People with low self-esteem are often not confident enough to employ proactive and problem-focused coping strategies in the face of emotional distress. Instead, they are likely to surrender to their problems by, for example, using drugs. People with low self-esteem might believe that drugs would bring them some relief from their problems. At the same time, continuous drug use can also lower people's self-esteem once they experience feelings of failure and loss of control owing to their inability to quit the drug. This way, low self-esteem can be a cause but also a result of drug use and addiction (Greenberg, Lewis, & Dodd, 1999).

The present study aimed to examine self-esteem in the context of drug use as an attempt of coping with emotional distress. The study targeted undergraduate university students in Botswana. Our review of literature did not find epidemiological studies that assessed the prevalence of drug addiction in Botswana. Data were only available from the First Botswana Youth Risk Behavioural Surveillance Survey (2012) which found that among 10 to 19 year old students from primary and secondary schools, 14.9 percent reported having used marijuana at least once while smaller proportions reported having ever used cocaine (5.6%), ecstacy (3.7%) and sextacy (5.7%). Few, if any, empirical studies investigated psychological variables in the Botswana context of drug use. The present study asked (1) whether university students contemplated to use drugs in order to forget about distressing events

and if so, (2) whether such contemplation was associated with low self-esteem, and (3) whether contemplating drug use was associated with actual drug use.

The study was entrenched within the Theory of Reasoned Action/Planned Behaviour (Ajzen, 1985; Fishbein & Ajzen, 1975). According to this theory, people's intentions are a strong predictor of whether or not they engage in a specific behaviour. While this theory is often used to explain why people change their behaviour (e.g. give up smoking; Sanderson, 2004), this theory can also explain why some people may purposefully engage in drugs. For example, a person may contemplate to use drugs in order to feel "better" and once drugs are accessible, he or she might actually start taking drugs. According to the Theory of Reasoned Action/Planned Behaviour, people's intentions are influenced by their subjective norms and their attitudes towards certain behaviours, as well as whether they believe that they can actually carry out such behaviours (referred to as perceived behavioural control; Ajzen, 1985). In the process of contemplating drug use and imagining how "good" it could be to forget about one's problems, a person may develop a positive attitude towards drugs, which could encourage him or her to actually take drugs.

Considering that drug use is often preceded by alcohol use (Hall & Degenhardt, 2009; Odejide, 2006), the study also asked whether alcohol dependence played a role in contemplation of drug use and actual drug use. Considering that the abuse of licit drugs, i.e., prescription drugs, is also a drug problem (UNODC, 2014), the study further asked whether or not participants had overdosed with prescription drugs. Earlier research suggests that males and younger cohorts were more likely to use and abuse substances than females and older cohorts respectively (Degenhardt et al., 2008). This study also asked whether gender and age made a difference in contemplation of drug use as well as actual drug use and alcohol dependence.

The study hypothesized that (1) contemplation of drug use would be associated with actual drug use, (2) both contemplating drug use and actual drug use would be associated with low self-esteem, and (3) alcohol dependence would be associated with both contemplating drug use and actual drug use. The study should contribute to a better understanding of the psychological complexity of drug use among young people in Botswana. The results could inform prevention and intervention programmes offered by universities to support students who are vulnerable to drug use.

METHODS

Procedure and participants

A self-administered questionnaire was distributed in four undergraduate classes attended by students from various academic programmes at the University of Botswana. Participation in the study was voluntary and students were informed about the purpose of the study, their right to withdraw from participation, and the anonymous and confidential treatment of their responses. Students also received debriefing information about counselling services offered by the University. The response rate was 96.8%. Thirty-one questionnaires were excluded from data analysis because they were in large part incomplete or because the respondents were below the age of 18 or above the age of 30 years.

The final sample remained with 249 participants of whom 161 (65.4%) were female and 85 (34.6%) were male. Their *mean* age was 20.12 years (*SD* = 2.02) ranging from 18 to 27 years. About 60.4 percent had grown up in an urban area and 39.6 percent in a rural area. While 28.6 percent of the participants did not know their father's highest level of education, 42.7 percent had a father who had completed tertiary education and 55.4 percent had a mother who had completed tertiary education. Participants were enrolled in the Faculties of Business (36.9%), Social Sciences (34.9%), Humanities (12.1%), Sciences (6.0%), Engineering and Technology (5.2%), and Education (4.8%). At the time of the study, 44.6 percent of the participants resided on campus, while 55.4 percent lived outside campus (Table 1).

Measures

Self-esteem was measured with Rosenberg's (1965) self-esteem scale, which is a widely used instrument with strong validity and reliability (Robinson, Shaver, & Wrightsman, 1991). This measure contains ten items (five of them reverse coded) with response categories at a 4-point Likert scale (1 = strongly disagree, 4= strongly agree). High total self-esteem scores indicate high self-esteem. In this study, the self-esteem measure had a strong internal consistency reliability (Cronbach's *alpha* = 0.84).

Substance use was measured with three questions that explored whether or not participants (1) used illicit drugs repeatedly, (2) had overdosed with prescription drugs, and (3) drank alcohol. *Contemplation of drug use to cope with emotional distress* was measured with a single-item

Table 1. Demographic and academic background of the participants

		N	*%*
Age	*Mean* = 20.12 years *SD* = 2.02 Range 18 to 27 years		
Gender	Female	161	65.4
(3 missing)	Male	85	34.6
Place of upbringing	Urban area	148	60.4
(4 missing)	Rural area	97	39.6
Highest level of education, Father	Tertiary education	106	42.7
	Non-tertiary education	72	28.7
	"Don't know"	71	28.6
Highest level of education, Mother	Tertiary education	138	55.4
	Non-tertiary education	90	36.2
	"Don't know"	21	8.4
Faculty enrolment	Business	92	36.9
	Social Sciences	87	34.9
	Humanities	30	12.1
	Sciences	15	6.0
	Engineering and Technology	13	5.2
	Education	12	4.8
Residence	On campus	111	44.6
	Outside campus	138	55.4

phrased as "Most of the time I feel that I should just get intoxicated to forget about the things that hurt me" and with two response categories (0 = No, 1 = Yes).

Alcohol dependence was measured with four items developed for this study: (1) "If I were to go for a long time without alcohol, most of my days would definitely be boring", (2) "I do not like anything to stand between me and my drink", (3) "I would do anything I have to, just to get alcohol", and (4) "Alcohol is really good to me". Response categories were presented at a 5-point Likert scale ranging from strongly disagree (= 1) to strongly agree (= 5). High total scores indicated alcohol dependence. For these four items, a strong internal consistency reliability was obtained (Cronbach's *alpha* = 0.88).

Demographic and academic background variables measured gender, age, rural vs. urban place of upbringing, parents' level of education as an indicator of socio-economic background, the Faculty in which the participants were enrolled, and whether or not participants resided on campus or outside campus.

Data analysis

Data were analysed with IBM SPSS Statistics 23. Descriptive statistics were employed to describe participants' drug and alcohol use and their level of self-esteem. Bivariate correlation analysis was performed to determine the relationship between self-esteem, alcohol dependence, drug and alcohol use, and contemplation of drug use (utilising Pearson's *R*). Chi-square tests (including continuity correction for 2x2 tables) were employed to measure differences in drug and alcohol use with regard to contemplation of drug use and demographic and academic background variables. Once it was established that self-esteem was not associated with alcohol dependence, binary logistic regression analysis was applied to determine whether or not self-esteem and alcohol dependence (for participants who reported drinking alcohol) were predictors of contemplating drug use. The 5 percent significance level ($p \leq 0.05$) and the 95 percent confidence interval were applied.

RESULTS

Drug use and drinking alcohol

In total, 84 (34.0%) participants reported that they used drugs repeatedly, 42 (17.5%) participants reported that they had at some point overdosed with prescription drugs, and 101 (40.6%) participants reported that they drank alcohol (Table 2). Participants who took drugs repeatedly were more likely to also have overdosed with prescription drugs ($\chi^2(1) = 4.05$, $p = 0.044$). Participants who drank alcohol were more likely to use drugs repeatedly ($\chi^2(1) = 48.65$ $p = 0.000$) but they were not more likely to have overdosed with prescription drugs ($\chi^2(1) = 0.13$, $p = 0.715$).

Male participants were more likely to have taken drugs repeatedly ($\chi^2(1) = 19.54$, $p = 0.000$) and they were also more likely to drink alcohol ($\chi^2(1) = 10.64$, $p = 0.001$) than females. Age was not associated with repeated drug use, with overdosing with prescription drugs or with drinking alcohol.

Contemplating drug use as an attempt to cope with emotional distress

In total, 54 (22.1%) participants reported that they had contemplated to use drugs in order to forget about the "things" that hurt them. As expected, they were

more likely to take drugs repeatedly ($\chi^2(1) = 14.36$, $p = 0.000$) and to drink alcohol ($\chi^2(1) = 21.00$, $p = 0.000$), but they were less likely to have overdosed with prescription drugs ($\chi^2(1) = 15.18$, $p = 0.000$; cf. Table 2). Participants who contemplated drug use to forget about hurtful events did not differ significantly in terms of gender and age.

Self-esteem

With regard to the participants' self-esteem, a *mean* score of 30.09 (*SD* = 5.20) was obtained with total scores ranging from 14 to 40 (out of a possible score range from 10 to 40) indicating that on average participants scored towards a higher level of self-esteem. Contrary to what was expected, self-esteem was not associated with repeated drug use ($r = -0.03$, $p = 0.653$). However, participants who had overdosed with prescription drugs had significantly lower self-esteem scores than participants who had not overdosed ($r = 0.13$, $p = 0.038$). The hypothesis that participants who had contemplated drug use to forget about hurtful events would have lower self-esteem scores than their counterparts was supported ($r = 0.22$, $p = 0.000$). Self-esteem was not associated with drinking alcohol. There were no significant differences in self-esteem scores by gender. However, there was a significant positive association between self-esteem and age ($r = 0.18$, $p = 0.006$).

Alcohol dependence

Among participants who drank alcohol, a relatively low *mean* alcohol dependence score of 8.33 (SD = 4.02) was obtained with total scores ranging from 4 to 20 (which was also the possible score range). Alcohol dependence was associated with taking drugs repeatedly ($r = 0.24$, $p = 0.018$), but it was not associated with overdosing with prescription drugs ($r = 0.17$, $p = 0.107$). In line with our hypothesis, participants who contemplated drug use to forget about hurtful events had higher alcohol dependence scores ($r = 0.24$, $p = 0.020$). Male participants were more likely to have higher alcohol dependence scores than females ($r = 0.23$, $p = 0.021$). There was no association between self-esteem and alcohol dependence. There was also no association between age and alcohol dependence.

Self-esteem and alcohol dependence as predictors of contemplating drug use

Considering that self-esteem and alcohol dependence were not associated, a model was formulated which assumed that both self-esteem and alcohol

Table 2. Consumption of drugs and alcohol and contemplation to use drugs

		Total		Contemplated drug use to cope with emotional stress (*N* = 54)	
		N	%	%	χ^2(df)
Repeated use of illicit drugs	No	163	66.0	43.4	14.36(1)*
(2 missing)	Yes	84	34.0	56.6	
Overdosed with prescription drugs	No	198	82.5	62.7	15.18(1)*
(9 missing)	Yes	42	17.5	37.3	
Drinks alcohol	No	148	59.4	31.5	21.00(1)*
	Yes	101	40.6	68.5	

* $p < 0.001$

dependence could predict whether or not participants had contemplated drug use to cope with hurtful events. Applying binary logistic regression analysis and considering only participants who reported drinking alcohol (N = 98), the results showed that both self-esteem and alcohol dependence contributed significantly to predicting contemplation to use drugs, with self-esteem having a slightly stronger predictive ability than alcohol dependence (Table 3). The results indicate that an increase in self-esteem will decrease the probability of contemplating drug use to forget about hurtful events (B = -0.12), while higher alcohol dependence will increase the probability of contemplating drug use (B = 0.14). Although the predictive model was supported, the two variables, self-esteem and alcohol dependence, explained only between 11.2 percent (Cox & Snell R Square) and 15.3 percent (Nagelkerke R Square) of the variability.

DISCUSSION

This study aimed to draw attention to contemplation of drug use as one of the ways that young people attempt to cope with emotional distress. About a fifth of the participants reported contemplating drug use to forget about hurtful events. These young people were more likely to have taken drugs. While there was a positive relationship between contemplating drug use and actual drug use, a sizeable proportion (more than 40%) of those who had contemplated drug use had not (yet) taken drugs. This group requires particular attention as they could start using drugs once they are accessible to them. In line with the Theory of Reasoned Action/Planned Behaviour (Ajzen, 1985; Fishbein & Ajzen, 1975), contemplation of drug use could lead to intentions to use drugs and once people intend to use drugs they are likely to engage in drug use. This would mean that young people who contemplate drug use are at risk of actually taking drugs.

The question arises as to why young people would contemplate drug use in order to cope with their emotional distress. While many young people know about the adverse effects and the dangers of using drugs, such knowledge does not necessarily prevent them from using drugs (Botvin, 2000). Prevention efforts that aim to educate young people about the dangers of drugs and that seek to enhance their competences in resisting drugs seem to lack long-term effectiveness (Botvin, 2000). The present study hypothesised that a low self-esteem would be associated with the contemplation of drug use as well as with actual drug use.

Table 3. Binary logistic regression predicting the likelihood of contemplation to use drugs based on self-esteem and alcohol dependence (for participants who reported drinking alcohol, N = 98)

	Contemplating drug use to forget hurtful events				
	B	**(*SE*)**	**Wald**	**OR (95% *CI*)**	***p*-Value**
Self-esteem	-0.12	0.05	5.76	0.89 (0.80,0.98)	0.016
Alcohol dependence	0.14	0.06	5.52	1.15 (1.02, 1.28)	0.019

The first part of the hypothesis was supported as participants who contemplated drug use to cope with hurtful events had significantly lower levels of self-esteem. Contrary to expectation and to what is reported in the literature (Brook et al., 2011; Wild et al., 2004; Zamboanga et al., 2009), the second part of the hypothesis was not supported as actual drug use was not associated with low self-esteem. These results suggest that low self-esteem per se is not directly associated with drug use. However, low self-esteem can be a contributing factor to drug use once a person perceives taking drugs as a way to cope with emotional distress. When a person uses drugs to have fun or out of curiosity, low self-esteem is not likely to contribute to drug use. However, once a person contemplates drug use to forget about hurtful events, low self-esteem is likely to encourage drug use as a form of avoidance of hurtful memories.

People with low self-esteem have little regard for themselves (Rosenberg, 1965) and, therefore, they may not feel confident enough to protect themselves from further hurt and may instead give in to the hurt. As a result of their low self-worth, they may also perceive drugs as, at least temporarily, an escape and/or relief from unpleasant and harsh experiences of the present or the past; they may even subscribe to drugs and their adverse consequences as a form of self-punishment (Klonsky, 2007). It is also likely that the hurtful events had negatively affected their self-esteem, which in turn contributed to their avoidant behaviour (Greenberg et al., 1999).

In addition to being associated with self-esteem, both contemplating drug use in an attempt to cope with hurtful events and actual drug use were also associated with alcohol dependence. However, self-esteem and alcohol dependence were not associated. To a certain extent, this result is in accordance with the literature, which reports some studies that found a relationship between low self-esteem and problematic drinking while others did not (Coleman, Hendry, & Kloep, 2007).

In this study, both self-esteem and alcohol dependence had the ability to predict contemplation of drug use in an attempt to cope with hurtful events; with self-esteem having a slightly stronger predictive ability than alcohol dependence. The results suggests that an increase in self-esteem scores will significantly decrease the probability of contemplating drug use to forget about hurtful events while an increase in alcohol dependence scores will less significantly increase the probability of contemplating drug use. However, the predictive power of both self-esteem and alcohol dependence was low, which indicates that other variables that the study did not control for must have contributed to participants' contemplation of drug use in an attempt to cope with emotional distress.

This study found that male students were more likely than females to have taken drugs, to have drank alcohol, and to have had higher scores in alcohol dependence. These results are similar to what was reported in other studies (Degenhardt et al., 2008; Moitlakgola & Amone-P'Olak, 2015). However, there were no gender differences in contemplating drug use. There were also no gender differences in self-esteem. Therefore, the results of this study suggest that both male and female university students may be equally at risk of using drugs once confronted with hurtful events and once they contemplate finding relief through drugs.

The study did not find any gender differences with regard to overdosing with

prescription drugs, which contradicts findings from other studies that suggest that men are more likely to abuse illicit drugs while women are more likely to abuse prescription drugs (Greenberg et al., 1999). Interestingly, while participants who had taken drugs repeatedly were more likely to also have overdosed with prescription drugs, those who contemplated drug use as a coping attempt were less likely to have overdosed with prescription drugs. This result suggests that when young people contemplate drug use to forget about hurtful events they are likely to have drugs in mind that produce a so-called "high". Hall & Degenhardt (2009) reported that one of the reasons why young people get attracted to illicit drugs is the "high" that these drugs produce while most prescription drugs have a rather calming effect. Contrary to age differences in drug use that have been reported in the literature (Degenhardt et al., 2008), in this study, age did not result in significant differences in contemplation of drug use, in the use of drugs, in overdosing with prescription drugs, and in alcohol dependence. An explanation for these results could be that the sample was a relatively homogenous age group of university students.

Limitations

This exploratory study had limitations. Firstly, the study did not explore the different types of hurtful events that the participants had in mind when contemplating drug use and the kind of drugs they were taking or contemplating to take. Secondly, the sample was not representative and the participants, being university students, were a rather homogeneous group (Peterson, 2001). As a result, the external validity of the study is limited. Thirdly, the various associations do not take into account possible interaction effects between the different variables. More research is needed to address these limitations and to control for intervening, mediating or moderating variables in order to determine predictors of drug use ideation in the Botswana context.

CONCLUSION

In spite of the need for more research, the results of the study suggest that prevention and intervention programmes should pay particular attention to those young people who contemplate drug use in order to cope with emotional distress. The results imply that self-esteem plays a role in contemplation of drug use. Since contemplation of drug use may be the initiator of actual drug use, there is a need for intensified psychological health services in tertiary education institutions in Botswana that include self-esteem enhancement. Low self-esteem and contemplation of drug use are not only exposing university students to the risk of addiction, they are also likely to prevent students from performing well in their academic endeavours. Programmes to enhance students' self-esteem as part of drug use prevention and intervention strategies are recommended for tertiary education institutions in Botswana to reduce the risks and negative consequences of drug use and to assist students in successfully overcoming hurtful memories, experiences, and events.

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